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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,405	02/02/2000	Michiaki Uchikawa	0879-0252P	6155

7590 03/11/2005

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EXAMINER

HENN, TIMOTHY J

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/496,405

Applicant(s)

UCHIKAWA, MICHIAKI

Examiner

Timothy J Henn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 September 2004 has been entered.

Response to Arguments

1. Amendments to claims 1-3 overcome the previous 35 USC 112 rejections, these rejections are therefore withdrawn.
2. Applicant's arguments filed 22 September 2004 have been fully considered but they are not persuasive. The applicant argues that the combination of Sato in view of Anderson does not disclose converting original image data into display image data if conversion is determined to be necessary (response, page 12). However, it is noted that Sato decompresses (i.e. reads) original image data according to a number of scans determined by the connected LCD device (c. 5, l. 1 - c. 6, l. 18). Sato further discloses thinning the image according to a connected LCD devices resolution by skipping every [thinning number +1]th pixel (c. 7, ll. 8-32). It is noted that when this process is carried out and the number of scans is set to N4 and the thinning number is set to 0 (e.g. Figure 13, Type A), the resulting image will be equivalent to the original image data (i.e. no

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conversion will have taken place). If the display is not of Type A, the number of scans and thinning number will be set to different values resulting in a conversion process being performed and a converted image being output. Therefore, Sato does meet the limitation of converting original image data into display image data if conversion is determined to be necessary as claimed.

The applicant further argues that "Anderson's teaching of an enhanced image filed only suggests converting a captured image in a format displayable on an internal LCD device in a digital camera". While this may be true if Anderson is looked at alone, it is noted that the rejection is based on the combination of Sato and Anderson. In this combination Sato is relied upon for the basic structure of the camera and the selective conversion of original image data into display image data. Anderson is solely relied upon to teach the storing of different resolution versions of a single image together in a file which is stored on the recording medium in order to quickly display a full resolution image on a display without the delay of having to resize the original image data (Anderson, Column 6, Line 51 - Column 7, Line 5). By adding this teaching into Sato it is noted that the basic structure of Sato would not significantly change. The combination based on Sato would still need to determine the resolution of the LCD prior to converting the original image data into display image data (if needed), however the original image data and the display image data would be stored together in a single file as taught by Anderson to accelerate the user interface when the image is displayed on the display in the future since resizing the original image data would not be necessary .

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 2, 6-13 and 15- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 6,335,760) in view of Anderson (US 6,137,534).

[claim 1]

In regard to claim 1, note that Sato discloses an image data reading device that reads original image data (Figure 1, Item 13; Column 4, Lines 1-3); a converting device that determines whether conversion of the original image data is necessary based on a size of the original image data and a display resolution or "size" corresponding to a display and if conversion is determined to be necessary, converts the original image data read by the image data reading device into display size image data in the display size of the display (e.g. Figures 13 and 14A; Column 6, Line 38 - Column 8, Line 54) and an image recording device (Figure 1, Item 17) that records the original image data read by the image data reading device onto a first recording medium (Figure 1, Item 16; Column 3, Lines 60-67). Therefore, it can be seen that Sato lacks recording the display image data produced by the converting device into the first recording medium if the conversion of the original image data has been determined to be necessary by the converting device.

Anderson discloses an enhanced image file (Figure 5) which includes multiple version of an image at different resolutions which allows a digital camera to quickly display a version of the captured image on a display without delays related to resizing

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the original image data to fit the display (Column 7, Line 51 - Column 8, Line 5).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to store the image display data in an enhanced image file as taught by Anderson to quickly display a version of the image without the need for resizing the original image data the next time the image is displayed.

[claim 2]

In regard to claim 2, note that the image data reading device reads the original image data from a second recording medium (Figure 1, Item 14; Column 4, Lines 1-9) that is built into a digital camera.

[claim 6]

In regard to claim 6, note that the first recording medium of Sato is detachably mounted in the image file apparatus (Column 3, Lines 66-67).

[claim 7]

In regard to claim 7, note that Anderson discloses the use of the reduced resolution images to quickly display image data without resizing the original image data while Sato discloses only converting the image data into thinned or resized image data if necessary as determined by the image data and the inherent resolution of the display. It is therefore submitted that if the conversion was not necessary, the resized image data would not be created and thus the original image data would be readout by the image data reading device and on the other hand if the conversion was necessary, the resized image data would be readout under the teachings of Anderson. It is further noted that Sato discloses a display driver (Figure 1, Item 21) that drives the display to

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display an image in accordance with the readout image data (Column 4, Lines 10-20).

[claim 8]

In regard to claim 8, note that Sato in view of Anderson would inherently include an image data reading device that determines the one of the original image data and the display image data to be read from the first recording medium in order to properly determine which image is to be used when an image is to be displayed on the screen. Therefore, it can be seen that Sato in view of Anderson does not disclose a management table file stored in the first recording medium. However, it is noted that recording mediums used in common digital cameras include a file system which stores a management table indicating the file names and positions of the files stored on the storage medium (Official Notice). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a management table in order to keep track of the files stored on the recording medium.

[claim 9]

In regard to claim 9, note that Sato discloses an image file apparatus wherein if the size of the original image data is large than the display size (i.e. for display sizes B, C and D in Figures 13 and 14A) corresponding to the display, the converting device is configured to determine that conversion is necessary, and convert the original image data in order to thin or "reduce" the number of pixels (Column 6, Line 38 - Column 8, Line 54).

[claim 10]

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In regard to claim 10, note that Sato discloses changing the resolution of an output image to correspond to a display size, but does not teach an interpolation process to increase the resolution of an image if determined to be necessary based on the display size. However, it is well known in the art that interpolation processes can be used to increase image resolution (Official Notice). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a resolution increasing interpolation process in Sato to be able to increase the resolution of an image to meet a required display size of the display.

[claim 11]

In regard to claim 11, note that the original image data is captured via digital communication (Figure 1, note that the system is a digital system using digital communication to transfer data), the captured original image data being read by the image data reading device.

[claims 12, 13, 15-18 and 20]

Claims 12, 13, 15-18 and 20 are method claims corresponding to apparatus claims 1, 2, 7-10 and 11, respectively. Therefore, claims 12, 13, 15-18 and 20 are analyzed and rejected as previously discussed with respect to claims 1, 2, 7-10 and 11.

[claim 19]

In regard to claim 19, note that Sato in view of Anderson determines that the conversion is not necessary if the size of the original image data is compatible with the display size corresponding to the display apparatus (Figures 13 and 14A; Column 6, Line 38 - Column 8, Line 54).

5. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 6,335,760) in view of Anderson (US 6,137,534) as applied to claim 1 above, and in further view of Nagasaki et al. (US 5,153,730).

[claim 3]

In regard to claim 3, note that Sato in view of Anderson discloses an image file apparatus as claimed in claim 1 as discussed above. Therefore, it can be seen that Sato in view of Anderson lacks a second recording medium that is capable of being detachably mounted in the digital camera.

Nagasaki et al. discloses a digital camera which copies image data from a second recording medium before processing the image data and storing it in a first image recording medium (Column 7, Lines 27-45) which are removably connected to the camera (Column 4, Line 64 – Column 5, Line 2) to avoid the use of built in large buffer memories and to allow the camera to have simpler hardware configurations compared to that of the conventional digital camera (Column 7, Lines 27-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a removable memory card as the second recording medium as taught by Nagasaki et al. to have a digital camera with a simple hardware configuration.

[claim 14]

Claim 14 is a method claim corresponding to apparatus claim 3. Therefore, claim 14 is analyzed and rejected as previously discussed with respect to claim 3.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 6,335,760) in view of Anderson (US 6,137,534) as applied to claim 1 above, and in further view of Takahashi (US 5,067,029).

[claim 4]

In regard to claim 4, note that Sato in view of Anderson discloses an image file apparatus which meets the requirements set forth in claim 1 as discussed above. Therefore, it can be seen that Sato in view of Anderson lacks a first recording medium, which is built-in to the image file apparatus.

Takahashi discloses an electronic still camera, which includes an image file storage apparatus, which is built-in to the camera (Figure 10, Items 34, 40 or 56) to reduce the total number of external pieces that the user must carry. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a built-in first recording medium as taught by Takahashi to reduce the number of pieces a user must carry.

[claim 5]

In regard to claim 5, note that Sato in view of Anderson discloses an image file apparatus which meets the requirements set forth in claim 1 as discussed above. Therefore, it can be seen that Sato in view of Anderson lacks a first recording medium, which is attached to an outside of the image file apparatus.

Takahashi discloses an electronic still camera, which includes an optical recording unit which is detachably linked or "attached to an outside" of the digital camera. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a detachably linked external recording unit or "first recording medium" as taught by Takahashi to decrease the overall weight of the camera.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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